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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------|
| 10/659,065 | 09/10/2003 | Ruth E. Shefer | 6931 | 3821 |
| 55740 | 7590 | 02/03/2006 | | |
| GAUTHIER & CONNORS, LLP 225 FRANKLIN STREET BOSTON, MA 02110 | | | EXAMINER SONG, HOON K | |
| | | | ART UNIT 2882 | PAPER NUMBER |

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/659,065

Applicant(s)

SHEFER ET AL.

Examiner

Hoon Song

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35-57 and 61-70 is/are allowed.
- 6) ☒ Claim(s) 58 and 60 is/are rejected.
- 7) ☒ Claim(s) 59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a-list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/21/2005 has been entered.

Claim Objections

Claims 35, 58 and 61 are objected to because of the following informalities:

In claim 35 at line 8-9, "said x-ray output signal" lacks proper antecedent basis.

In claim 58 at line 9-10, "said x-ray output signal" lacks proper antecedent basis.

In claim 61 at line 1, "the x-ray output" lacks proper antecedent basis; at line 9-10, "said x-ray output signal" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 58 and 60 are rejected under 35 U.S.C. 102(b) as being anticipated by Hell et al. (US 6178226B1).

Regarding claim 58, Hell teaches a system for controlling the X-ray output of an X-ray tube, said system comprising:

an X-ray tube (1) that emits an X-ray output through a window in response to a control signal;

an X-ray detector (9) on which substantially all of the X-ray output impinges, said X-ray detector (9) providing a detected X-ray signal indicative of a property of the X-rays that are emitted by the X-ray tube through the window; and

a control system (10) that receives said detected X-ray signal and adjusts said control signal responsive to changes in conditions within said X-ray tube (focusing condition) to ensure that said X-ray output signal is substantially maintained at a predetermined value (synchronization pulse value, column 6 line 34-43).

Regarding claim 60, Ishijima teaches said X-ray detector provides a filter function (x-ray imaging is considered a filter function).

Allowable Subject Matter

Claims 35-57 and 61-67 are allowed over prior art.

Claim 59 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 35-58 and 64-67, the prior art fails to teach a system or method for controlling the x-ray output of an x-ray tube having an x-ray transmissive x-ray

detector through which at least a portion of said x-ray output passes and provide a detected x-ray signal indicative of a property of the x-rays, and a control system that receive said detected x-ray signal and adjusts said control signal responsive to changes in conditions within said x-ray tube to ensure that said output signal is substantially maintained at a predetermined value as claimed in claims 35, 59 and 64.

Regarding claims 61-63 and 68-70, the prior art fails to teach a system or method for controlling an x-ray output of an x-ray tube having an x-ray detector that is on an x-ray window and provide a detected x-ray signal indicative of a property of the x-ray and a control system that receive the detected x-ray signal and adjusts the control signal responsive to changes within the x-ray tube to ensure that the x-ray output signal is substantially maintained at a predetermined value as claimed in independent claims 61 and 68

Response to Arguments

Applicant's arguments with respect to claims 58 and 60 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HKS

2/1/06
HKS



DAVID V. BRUCE
PRIMARY EXAMINER